



01-16-07

AF
JW

PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0651-0031

U.S. Patent and Trademark Office: U.S. DEPARTMENT OF COMMERCE

Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.

TRANSMITTAL FORM (to be used for all correspondence after initial filing)	Application Number	09/177,814	
	Filing Date	October 23, 1998	
	First Named Inventor	Terry L. Gilton	
	Art Unit	1641	
	Examiner Name	N. Yang	
Total Number of Pages in This Submission	9	Attorney Docket Number	2269-3530.3US (97-1257.00/US)

ENCLOSURES (check all that apply)			
<input type="checkbox"/> Fee Transmittal Form	<input type="checkbox"/> Drawing(s)	<input type="checkbox"/> After Allowance Communication to TC	
<input type="checkbox"/> Fee Attached	<input type="checkbox"/> Licensing-related Papers	<input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences	
<input type="checkbox"/> Amendment / Reply	<input type="checkbox"/> Petition	<input checked="" type="checkbox"/> Reply Brief	
<input type="checkbox"/> After Final	<input type="checkbox"/> Petition to Convert to a Provisional Application	<input type="checkbox"/> Proprietary Information	
<input type="checkbox"/> Affidavits/declaration(s)	<input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address	<input type="checkbox"/> Status Letter	
<input type="checkbox"/> Extension of Time Request	<input type="checkbox"/> Terminal Disclaimer	<input type="checkbox"/> Other Enclosure(s) (please identify below):	
<input type="checkbox"/> Express Abandonment Request	<input type="checkbox"/> Request for Refund		
<input type="checkbox"/> Information Disclosure Statement	<input type="checkbox"/> CD, Number of CD(s) _____		
<input type="checkbox"/> Certified Copy of Priority Document(s)	<input type="checkbox"/> Landscape Table on CD		
<input type="checkbox"/> Reply to Missing Parts/ Incomplete Application	Remarks		
<input type="checkbox"/> Reply to Missing Parts under 37 CFR 1.52 or 1.53	The Commissioner is authorized to charge any additional fees required but not submitted with any document or request requiring fee payment under 37 C.F.R. §§ 1.16 and 1.17 to Deposit Account 20-1469 during pendency of this application.		
SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT			
Firm	TraskBritt, P.C.		
Signature			
Printed Name	Brick G. Power		
Date	January 12, 2007	Reg. No.	38,581

CERTIFICATE OF MAILING	
Express Mail Label Number: <u>EV827470424US</u>	
Date of Deposit: <u>January 12, 2007</u>	
Person Making Deposit: <u>Di Sanders</u>	

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

If you need assistance in completing the form, call 1-800-PTO-9199 and select option 2.



PATENT

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:

Terry L. Gilton

Serial No.: 09/177,814

Filed: October 23, 1998

For: SEPARATION APPARATUS
INCLUDING POROUS SILICON COLUMN

Confirmation No.: 3621

Examiner: N. Yang

Group Art Unit: 1641

Attorney Docket No.: 2269-3530.3US

NOTICE OF EXPRESS MAILING

Express Mail Mailing Label Number: EV827470424US

Date of Deposit with USPS: January 12, 2007

Person making Deposit: Di Sanders

REPLY BRIEF

Mail Stop Appeal Brief – Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

This Reply Brief follows the Examiner's Answer of November 14, 2006, and is being filed pursuant to 37 C.F.R. § 41.41. As January 14, 2007, falls on a Sunday, the period for filing this Reply Brief expires on Monday, January 15, 2007. 37 C.F.R. § 1.7.

VII. ARGUMENT

A. REJECTION UNDER 35 U.S.C. § 112, FIRST PARAGRAPH

Withdrawal of the 35 U.S.C. § 112, first paragraph, rejection of claim 1 is gratefully acknowledged.

B. REJECTIONS UNDER 35 U.S.C. § 102

3. ANALYSIS

In the Examiner's Answer, the Examiner asserts that Northrup discloses porous columns that communicate with a detector. In this regard, the Examiner's Answer, at page 11, provides:

Northrup et al in fact teach that the porous silicon members define an interface between two analysis devices (detectors) (claim 10). Therefore, the porous silicon members would be in communication with the analysis devices, which are considered to be the detectors. Examiner's Answer, page 11.

It is clear from the Examiner's understanding of Northrup, the analysis devices, or detectors, of Northrup are separate elements that are merely assembled with a porous silicon member. Therefore, even from the Examiner's perspective, Northrup does not expressly or inherently describe, or even teach or suggest, a sample separation apparatus in which "at least one detector [is] fabricated on the [same] substrate" as that in which "matrices comprising at least two distinct, unconnected porous regions" are formed, as recited in independent claim 1.

It is, therefore, respectfully submitted that Northrup does not expressly or inherently describe, or anticipate, each and every element of the sample separation apparatus to which independent claim 1 is directed. As such, under 35 U.S.C. § 102(b), independent claim 1 is allowable over the disclosure of Northrup.

Each of claims 3, 4, 7, 11, 18, 22-24, 111, and 112 is allowable, among other reasons, for depending directly or indirectly from claim 1, which is allowable.

It is also noted that the Examiner has not addressed the additional explanation that has been set forth in the Appeal Brief as to why dependent claim 7 is allowable. To restate: Northrup lacks any express or inherent description of “a reaction region . . . situated along a length of and contiguous with at least one of . . . at least two porous regions.” The description of Northrup is instead limited to chemical reaction chambers (col. 2, lines 11-18) without any indication that the chambers themselves include reaction regions or that the chambers may be situated along or contiguous with a porous region that extends across a substrate.

It is respectfully requested that the 35 U.S.C. § 102(e) rejections of claims 1, 3, 4, 7, 11, 18, 22-24, 111, and 112 be reversed, and that each of these claims be allowed.

C. REJECTIONS UNDER 35 U.S.C. § 103(a)

3. ANALYSIS

a. KNOLL IN VIEW OF NORTHRUP

It is respectfully submitted that a *prima facie* case of obviousness has not been established against independent claim 1 because Knoll and Northrup both lack any teaching or suggestion of an apparatus that includes a substrate on which a detector is fabricated and across which porous regions, which communicate with the detector, extend. Instead, the detectors of the device disclosed in Knoll communicate with discrete porous “containments.” By using the term “containment” Knoll suggests that the porous elements disclosed therein do not extend at even partially across a substrate. When the relative sizes of the substrate and the containments of

Knoll are considered (*see, e.g.*, FIG. 11), this suggestion is confirmed. It is further substantiated by the fact that Knoll describes the containments as terminal traps at the ends of branches of non-porous capillary columns. *See, e.g.*, FIGs. 10 and 11; col. 8, lines 50-64. In fact, the containments of Knoll are configured to micromechanically anchor ion-selective membranes (col. 3, line 65, to col. 4, line 2) and, presumably, to receive samples that are to be analyzed using the ion-selective membranes.

In view of the fact that the device of Knoll includes porous containments but not porous capillary columns, it is does not appear that one of ordinary skill in the art would have had any reason to incorporate porous columns of the type taught in Northrup into the non-porous capillary columns of Knoll. Nor has the Examiner set forth a convincing line of reasoning as to why one of ordinary skill in the art would have been so motivated.

Accordingly, it is respectfully submitted that, under 35 U.S.C. § 103(a), the subject matter to which independent claim 1 is directed is allowable over the teachings of Knoll and Northrup.

Claims 5, 7, 8, 10, 11, 14, 15, 25-29, 111, and 112 are each allowable, among other reasons, for depending directly or indirectly from claim 1, which is allowable.

b. HELLER, VICKERS, AND NORTHRUP

Like Knoll, the teachings of Heller are limited to devices with porous “micro-locations” that are in communication with optoelectronic or microelectronic detection components. As evidenced by their name, “micro-locations” do not extend across a substrate, particularly when their size is considered relative to the size of the substrate in which they are formed. Unlike

Knoll, the micro-locations of Heller do not communicate with capillary columns that extend across a substrate.

In view of these limitations on the subject matter taught or suggested by Heller, especially when considered along with the deficiencies in the teachings of Northrup and Vickers, a *prima facie* case of obviousness has not been established against independent claim 1, as would be required to uphold the 35 U.S.C. § 103(a) rejection of independent claim 1.

Each of claims 3, 5, 6-11, 14, 15, 18, 22-24, 111, and 112 is allowable, among other reasons, for depending directly or indirectly from claim 1, which is allowable.

c. BURNS IN VIEW OF NORTHRUP

Burns teaches the desirability of apparatus that include two pieces that have been bonded together: a first piece with channels and other features for handling fluids; and a second piece upon which electronic components, including sensors, are fabricated. Col. 21, line 24, to col. 22, line 13 (in particular, col. 21, lines 42-44). Thus, Burns does not teach or suggest that the channels of the disclosed device and the sensors thereof are formed in and fabricated on the same substrate, as required by independent claim 1.

As explained above, as well as in the APPEAL BRIEF, Northrup similarly lacks any teaching or suggestion of a substrate in which porous regions are formed and on which at least one detector is fabricated.

Therefore, Burns and Northrup cannot together teach or suggest a substrate in which porous regions are formed and on which at least one detector is fabricated, as recited in independent claim 1. It is, therefore, respectfully submitted that the teachings of Burns and

Northrup do not support a *prima facie* case of obviousness against independent claim 1. As such, the subject matter recited in independent claim 1 is allowable over the subject matter taught in Burns and Northrup.

Claims 3-5, 7-9, 13, 16-20, 22-27, 111, and 112 are each allowable, among other reasons, for depending directly or indirectly from claim 1, which is allowable.

d. BURNS, NORTHRUP, AND DUBROW

Claim 21 is allowable, among other reasons, for depending indirectly from claim 1, which is allowable.

XI. CONCLUSION

It is respectfully submitted that:

(A) Claims 1, 3, 4, 7, 11, 18, 22-24, 111, and 112 are allowable under 35 U.S.C. § 102(e) for being drawn to subject matter that is not anticipated by the subject matter described in Northrup;

(B) Under 35 U.S.C. § 103(a), the subject matter to which claims 1, 5, 7, 8, 10, 11, 14, 15, 25-29, 111, and 112 are directed is allowable over the teachings of Knoll, in view of teachings from Northrup;

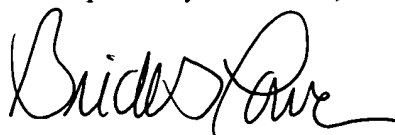
(C) Claims 1, 3, 5, 6-11, 14, 15, 18, 22-24, 111, and 112 recite subject matter that, under 35 U.S.C. § 102(b) (apparently 35 U.S.C. § 103(a)), is allowable over the subject matter described in Heller, in view of the disclosure of Vickers and, further, in view of the subject matter described in Northrup;

(D) Under 35 U.S.C. § 102(e) (apparently 35 U.S.C. § 103(a)), claims 1, 3-5, 7-9, 13, 16-20, 22-27, 111, and 112 are drawn to subject matter that is allowable over the disclosure of Burns, in view the subject matter disclosed in Northrup; and

(E) Claim 21 recites subject matter that, under 35 U.S.C. § 103(a), is allowable over teachings from Burns, in view of teachings from Northrup and, further, in view of the teachings of Dubrow.

Accordingly, reversal of the final rejections of claims 1, 3-11, 13-29, 111, and 112 is respectfully requested, as is the allowance of each these claims.

Respectfully submitted,

A handwritten signature in black ink, appearing to read "Brick G. Power", with a stylized, flowing script.

Brick G. Power
Registration No. 38,581
Attorney for Applicant
TRASKBRITT, PC
P.O. Box 2550
Salt Lake City, Utah 84110-2550
Telephone: 801-532-1922

Date: January 12, 2007

BGP/eg

Document in ProLaw